REMARKS/ARGUMENTS

Claims 1, 3-11 and 13-18 are pending and rejected.

Claims 1, 3-11, and 13-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Favor, US Pat. No. 6,732, 236 in view of Frederick, Jr. et al., (hereinafter "Frederick"), US Pat. No. 6,336,168.

Applicants respectfully submit the cited references fail to teach or suggest at least a method comprising associating a cache miss with a second instruction dependent on the first instruction, enqueuing the first instruction for re-execution, enqueuing the second instruction for execution, and after the cache miss with which the first instruction is associated is serviced, re-executing the first instruction and executing the second instruction (*e.g.*, as described in claim 1).

First, Applicants agree with the Office Action's indication that Favor fails to teach or suggest at least enqueing a second instruction for execution and executing a second instruction. *See* Office Action dated 8/22/2008, page 3. To make up for the deficiencies of Favor, the Office Action cited Frederick; specifically it alleges Frederick teaches merging multiple miss transaction together, in that a second instruction dependent on a first instruction, the second instruction is enqueued, and executed when the data needed for the first and second instructions is available, citing column 4, line 34 – column 5, line 35. *See* id. Applicants respectfully disagree.

First, with regard to the Office Action's rejection, Applicants note the Office Action cites to a single, large portion of Frederick to address specific limitations of the

claims and support its rejection. Applicants respectfully request further clarification as to which portions of the cited reference correspond to limitations in the claims.

Regardless, Applicants respectfully submit the cited reference Frederick as a whole fails to support a proper rejection of, for example, claim 1. This is so at least because the cited reference does not address to or relate to dependent instructions at all. Instead, the cited reference (including the cited portion) relate to a second load instruction that is requesting data in the same cache line addressed by a first instruction. Indeed, column 4, lines 46-54 of the cited portion state: "For purposes of this example, it is assumed that this second load instruction is requesting data in the same cache line addressed by the first load instruction. Therefore, the second load instruction is also addressing the same cache line as the first instruction. In step 302, it will be determined that the cache line requested by the second load instruction is not within the L1 data cache 236, because this cache line was not available to the first load instruction." *See* also Summary of the Invention. Applicants submit the cited reference is directed two independent instructions that are referencing the same cache line; <u>not</u> a first instruction and a second instruction dependent on the first instruction as specifically recited in independent claim 1. Moreover, Applicants submit there is no evidence, implicit or explicitly in the Frederick reference that the two instructions are related in any way. The Office Action's assumption that the second instructions are "dependent" on the first instruction is wholly unsupported by the reference. Applicants submit these unsupported assertions are insufficient to support a proper rejection of independent claim 1.

In addition, the Office Action alleges that the Applicants specification describes the second instruction is part of a subset of instructions that are dependent on the first instruction. Applicants note, however, the Office Action offers no specific citation to the specification. *See* Office Action dated 8/22/2008, page 5. This unsupported assertion is inadequate to support such a limited interpretation of the recited language of the claim.

Applicants maintain the Frederick reference as a whole fails to address at least associating a cache miss with a second instruction dependent on the first instruction, enqueuing the first instruction for re-execution, enqueuing the second instruction for execution, and after the cache miss with which the first instruction is associated is serviced, re-executing the first instruction and executing the second instruction (*e.g.*, as described in claim 1). Therefore the current rejection of claim 1 is lacking for at least this reason. Applicants submit claim 1 is allowable and independent claims 5, 10, 13, and 16 are allowable for similar reasons. Dependent claims 3-4, 6-9, 11, 14-15, and 17-18 are allowable as depending from allowable independent claims. Applicants respectfully request the rejection of claims 1, 3-11, 13-18 under 35 U.S.C. § 103(a) be withdrawn.

It is believed that this Response places the application in condition for allowance, and early favorable consideration of this Response is earnestly solicited.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the telephone number listed below.

Application No.: 10/743,142
Amendment After Final dated: October 22, 2008
Reply to Office Action of August 22, 2008

The Office is hereby authorized to charge any fees, or credit any overpayments, to

Deposit Account No. **11-0600**.

Respectfully submitted,

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